

1 a large concrete storage basin, mix the carbon into a slurry solution. This slurry, in
2 roughly a one pound per gallon solution, could then be fed to various points throughout
3 the plant. This system would allow much higher dosages of PAC than are now available
4 with the bag carbon system to be fed to these various points in the plant. This will insure
5 compliance with the D/DPB (Stage I) and Synthetic Organic Chemical ("SOC")
6 regulations. Additionally, should a catastrophic organic chemical contamination occur in
7 Lake Vermilion (such as that which might occur from the spill of agricultural chemicals),
8 the bulk carbon system can apply high doses of PAC to multiple points in the plant,
9 including the filters.

10 Another improvement common to the alternatives is the addition of raw water
11 intake screens to the treatment facility. Currently, the treatment facility utilizes the
12 original intake (circa 1900) with minimal and inadequate screening. The original intake
13 structure has a rough bar grate with 4-inch centers to keep large debris such as logs from
14 entering the intake structure. This is followed by an intake screen with ½ inch centers.
15 Although the bar grate extends to the top of the intake, the intake screen only extends two
16 feet above the normal river level. Therefore, when river flows are high (which
17 corresponds with the greatest amount of debris in the river), the screens are overtopped
18 and debris can enter the intake and damage pumps or be transported into the treatment
19 facility. Additionally, in either the case of the bar grate or screen, there is no way to
20 backwash debris from these structures. Removal of debris is a time-consuming and
21 difficult manual endeavor.

22 The new intake screens will consist of parallel 20-inch intake lines extending into
23 the North Fork River and resting on the bottom. The intake lines will each terminate in a
24 tee configuration with each end of the tee further branching into two perpendicular tees
25 with these tees being 18-inch diameter by 57-inch length of ¼ inch slotted stainless steel
26 welded wire intake screen. The screens will be equipped with an air backwash system
27 capable of quickly and completely purging each screen. The new intake screens will
28 draw water from near the bottom of the river, thus eliminating most floating debris, will
29 be unaffected by high flows and will provide much greater protection from organic

1 materials being drawn into the treatment facility. This will equate to less organic matter
2 in the treatment facility, lowering chlorine demands, reducing the Total Trihalomethane
3 Formation Potential and better protecting pumps, valves and other treatment facility
4 equipment from damage and/or extraordinary maintenance.

5 The filter improvements include the modification of the filter effluent control
6 system from variable declining rate filters to constant rate. Additionally, state-of-the-art
7 turbidimeters will be added to each effluent line with a particle counter capable of
8 sampling any of the six filters. The filter-to-waste line will have a turbidimeter and
9 control valve added to improve the filter-to-waste capabilities. Lastly, as part of the ion
10 exchange plant addition, a proportioning control valve will be added into the filter
11 effluent header. All of these improvements are to insure compliance with the Enhanced
12 Surface Water Treatment Rule Turbidity Standard of 0.3 NTU and provide improved
13 monitoring and reporting capabilities.

14 The improvements to the SCADA system include the upgrade of the SCADA
15 software and the addition and replacement of the programmable logic controllers
16 ("PLCs") which will no longer be supported by the manufacturer due to obsolescence.
17 The current SCADA software is extremely limited in its ability to manipulate and archive
18 data. Additionally, the ability to electronically display data, particularly graphically, is
19 likewise limited. Currently, the trending of certain treatment parameters can only be
20 accomplished through the use of thermal strip chart plotters. The plotters are difficult to
21 maintain and the thermal paper provides poor data archiving. The SCADA
22 improvements will provide greater and more meaningful data upon which to control the
23 facility and to readily provide more information to regulators concerning treatment
24 facility operational performance. Additionally, by initiating a migration from the obsolete
25 PLCs to the selected models, plant downtime and maintenance costs can be minimized.

26 The D/DBP regulations and the need to improve the aesthetic character of the
27 water prompt the change of disinfection methods from breakpoint chlorination to
28 chloramination. Chloramination will prevent the formation of trihalomethanes, a set of
29 regulated substances of which the standard is being lowered from the current 100

1 micrograms/liter (ug/l) Total Trihalomethane (TTHM) to 80 ug/l TTHM in Phase I of the
2 D/DBP regulations. Phase II of the regulation is expected to lower this standard to 40 ug/l
3 TTHM in 2004.
4

5 **Q. What does the analysis discussed in the CTE Report demonstrate?**

6 A. The CTE Report demonstrates that the least-cost feasible approach for addressing the
7 regulatory concerns facing the Vermilion County Division is installation of ion exchange
8 (counter-current regeneration mode) facilities, along with the other treatment facility
9 improvements previously mentioned in my testimony. The PVRR associated with this
10 option is over \$6,000,000 below that of the next least-cost alternative, RO.
11

12 **Q. Would you discuss the ion exchange process?**

13 A. Yes. In simple terms, the process acts as a "filter" to remove nitrates and other
14 substances. In the ion exchange process, water containing nitrate passes through a media
15 bed comprised of a high-capacity anion exchange resin with a final gravel support media.
16 Nitrates, sulfates and alkalinity are exchanged for chlorides on the strongly basic anion
17 resin. The exchange capacity is largely governed by the concentrations of nitrates and
18 sulfates which are retained until breakthrough of unwanted ions occurs. Prior to
19 breakthrough, sometimes called exhaustion, the process is regenerated using a strong
20 chloride solution. Regeneration is generally based upon volume of water treated and is
21 designed to be accomplished before breakthrough occurs. Since there is little indication
22 of exhaustion of the nitrate removal capabilities prior to breakthrough, it is critical that
23 some margin of safety (i.e. 9.0 mg/l blended water) be maintained.

24 The basic chemical reactions are reversible as follows:

25 In Service: $\text{RCl} + \text{NaNO}_3 = \text{RNO}_3 + \text{NaCl}$

26 Regeneration: $\text{RNO}_3 + \text{NaCl} = \text{RCl} + \text{NaNO}_3$

27 Where R = anion exchange resin.

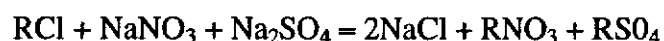
28 The counter-current mode regeneration utilizes an upflow regeneration and slow rinse and
29 a downflow in-service configuration. This results in lower leakage rates through the bed.

1 A disadvantage of this system is that higher capital costs are required to configure the two
2 flow modes. These costs must be compared with the lower operating and maintenance
3 costs and higher effluent quality that the method produces.

4 The ion exchange process generates a waste stream which contains concentrated
5 nitrates that have been removed and must be disposed of properly. The Danville Sanitary
6 District has indicated that it would accept the nitrate waste level assumed in connection
7 with the study. This method of disposal would require that additional force main be
8 constructed and that the current lift station be expanded or a new one built to effectively
9 transport the waste to the Sanitary District. These costs were included in CTE's cost
10 analysis. Alternatively, the waste stream could be discharged to an alternative point prior
11 to flowing to the receiving stream. These alternative points include the existing sludge
12 lagoons or Horseshoe Pond (the Company's previous sedimentation basin) located west
13 of the plant. Each of these options would require a modification to the existing NPDES
14 permit. At CTE's recommendation, the Company is pursuing such a modification or new
15 permit. However, preliminary correspondence with the IEPA has indicated that the
16 Sanitary District option may be the only permitted discharge point.

17
18 **Q. How would the ion exchange system be sized?**

19 **A.** The ion exchange system would be sized to treat a portion of the total plant flow such that
20 the plant would be capable of producing 10 MGD of blended water with a nitrate
21 concentration below 9 mg/l. The ion exchange process also would remove sulfates and
22 20-40 mg/l of alkalinity in the feed water as they exhibit a strong affinity for the resins.
23 The resins would exchange chlorides for nitrates and sulfates according to the following
24 reaction where R designates the ion exchange resin:



25
26
27
28 Therefore, the chloride concentration of the finished water would increase by
29 approximately two times. No Maximum Contaminant Level (MCL) exists for chloride,

1 but the secondary (aesthetic) standard for chloride is 250 mg/l to avoid a salt-water taste.
2 The blended finished water should be well below this standard.
3

4 **Q. Would you further discuss the requirements for the ion exchange system?**

5 A. Yes. Given average and maximum influent values of 12.7 and 15.6 mg/l, respectively, an
6 effluent nitrate concentration of 2 mg/l is easily achievable using the ion exchange
7 process. For the finished water to meet a goal of 9 mg/l, it would be required to treat only
8 a portion of the influent for nitrate. The balance could be "blended around" this process
9 and the combined water would then safely meet the standard. The overall treatment
10 capacity goal would be 10 MGD of finished water at less than 9 mg/l of nitrate based on
11 average and maximum influent nitrate concentrations of 12.7 and 15.6, respectively. At
12 worst case conditions, this would require a reliable ion exchange capacity of 3,056
13 gallons per minute (gpm). This capacity could be provided through four treatment
14 vessels, each with a treatment capacity of 764 gpm. The four vessels would provide the
15 required total maximum capacity. At average conditions, the required flow to be treated
16 by the ion exchange system would be 1,821 gpm, which could be provided through 3
17 treatment vessels with 1 unit out of service for regeneration or maintenance. The ion
18 exchange system would be housed in a pre-engineered steel structure, enclosing an
19 approximate surface area of 3,000 sq. ft. The structure would be located just north of the
20 existing reservoir. The flow configuration would include conventionally filtered water
21 piped toward the existing reservoir with a portion being discharged into the reservoir and
22 the required balanced (based upon nitrate concentrations and water demand) piped to the
23 ion exchange system. The effluent from the ion exchange system would be then
24 discharged into the reservoir.
25

26 **Q. When will the ion exchange equipment be purchased?**

27 A. The ion exchange equipment has been purchased by the General Contractor in the first
28 quarter of 2000. To expedite the long lead-time process of ordering the ion exchange
29 equipment, the Company solicited bids for this equipment in mid-1999. These bids have
30 already been received and the low bid was accepted and forwarded to contractors for

1 inclusion in their project bids. The equipment will begin operation prior to December
2 2000.

3
4 **Q. Has a contract been executed with a Contractor for the Regulatory Compliance**
5 **Facilities construction project?**

6 A. Yes. A construction contract has been executed with Bowen Engineering Corporation of
7 Fishers, Indiana as the result of a competitive bidding and selection process.

8
9 **Q. Will installation of the Regulatory Compliance Facilities result in a change in**
10 **expense levels?**

11 A. Yes. The resulting change has been reflected in the test year projection. The nitrate
12 facilities alone will increase operating costs (on an annualized basis) by approximately
13 \$32,000 per year.

14
15 **Q. Please describe the plant additions included in the Company's 2000 and 2001**
16 **investment projections.**

17 A. A detailed summary of plant additions included as the Company's 2000 and 2001
18 investment projections is set forth in Exhibit 2.2. In addition to the Regulatory
19 Compliance Facilities previously discussed, major capital projects in both years are
20 necessary to insure system reliability and to comply with the Safe Drinking Water Act as
21 well as Company guidelines to ensure safe drinking water to our customers.
22 The projects (other than the previously discussed Regulatory Compliance Facilities)
23 scheduled to be completed and placed in service in 2000 include the following:

24
25 1. The English Street Transmission Main which will provide a 24" water main
26 toward the Fowler Avenue Booster station to eventually provide additional
27 supply directly to this pump station which supplies Danville's industrial east
28 side. The projected cost is \$460,000.

29
30 2. The Perrysville Road Main project will provide water service along this road
31 and to the Valley Run Mobile Home Park. The majority of the cost of this

1 project is being funded by a State of Illinois Community Development
2 Assistance Program ("CDAP") grant. The Company's share in the project is
3 projected to be \$130,000.
4

5 3. The Marion Street private line replacement project will eliminate several
6 private water lines on the southeast side of Danville and will provide a water
7 main of proper size to this neighborhood. Additionally, fire protection will be
8 added in this area. The projected cost is \$28,000.
9

10 4. The Daisy Lane water main replacement project will replace an undersized
11 cast iron water main with a new 12" cement lined Ductile Iron Pipe. This will
12 eliminate two dead end water lines and should eliminate the source of ongoing
13 customer complaints in this area as well. The projected cost is \$100,000.
14

15 5. New and replacement water meters. This project will primarily replace meters
16 that are non-remote reading types that are more than 20 years old. The meter
17 replacements will be remote reading units of either the "Touch-read" or
18 "radio-reading" style. The projected cost is \$250,000.
19

20 6. Service line installations. This project will provide new service taps and the
21 installation of the Company-owned portion of service lines. This project will
22 also replace existing services due to conflicts with road widening projects,
23 leaks or the replacement of lead service lines. The projected cost is \$210,000.
24

25 7. Replacement of fire hydrants. This project will replace fire hydrants that are
26 leaking or malfunctioning in some other manner. Additionally, two nozzle
27 hydrants will be replaced with standard three nozzle hydrants (two hose
28 connections and a pumper nozzle) and hydrants that are on 4" water mains
29 will be targeted for replacement. The projected cost is \$100,000.
30

1 8. Wire rope hoist installation at the Lake Vermilion Dam. The installation of a
2 wire rope hoist at the dam will reduce response times to high flow and flood
3 events and allow for further automation of the complete control system that
4 regulates the level of the drinking water reservoir, Lake Vermilion. The
5 projected cost is \$76,000.

6
7 9. Various heavy vehicles need to be replaced. These vehicles will replace
8 equipment that has reached the end of its useful life in terms of run hours,
9 years of service, mileage and /or cost to maintain. The projected cost is
10 \$70,000.

11
12 In addition, the Company will invest approximately \$ 800,000 in 2000 on various
13 smaller projects, tools and equipment.

14
15 Plant additions scheduled to be placed in service in 2001 are as follows:

16
17 1. The English Street Transmission Main that will complete the installation of a
18 24" water main to the Fowler Avenue Standpipe and booster station. This
19 project will allow the full volume of the Standpipe to be utilized on a daily
20 basis to meet peak demand flows. The standpipe can then be refilled at night
21 utilizing off-peak pumping at the resultant lower pumping costs. The projected
22 cost is \$150,000.

23
24 2. Replacement of private lines. This project will replace undersized private lines
25 throughout the service area that offer limited volume and pressure and no fire
26 protection. Properly sized water mains with associated fire hydrants will be
27 installed. The projected cost is \$170,000.

28
29 3. Replacement of undersized water mains. This project will replace Company
30 owned water lines that range in size from ½ inch through 4" that are located
31 throughout the service area. Many of the customers that are served from these

1 lines suffer with low water pressure and volume and non-existent or low fire
2 flows. In addition, these lines are made of unlined cast iron or galvanized
3 materials that, through time, leads to the degradation of water quality due to
4 iron discoloring the water. The projected cost is \$170,000.
5

- 6 4. New and replacement water meters. This project will primarily replace meters
7 that are non-remote reading types that are more than 20 years old. The meter
8 replacements will be remote reading units of either the "Touch read" or
9 "radio-reading" style. The projected cost is \$250,000.
10

- 11 5. Service line installations. This project will provide new service taps and the
12 installation of the Company-owned portion of service lines. This project will
13 also replace existing services due to conflicts with road widening projects,
14 leaks or the replacement of lead service lines. The projected cost is \$210,000.
15

- 16 6. Replacement of fire hydrants. This project will replace fire hydrants that are
17 leaking or malfunctioning in some other manner. Additionally, two nozzle
18 hydrants will be replaced with standard three nozzle hydrants (two hose
19 connections and a pumper nozzle) and hydrants that are on 4" water mains
20 will be targeted for replacement. The projected cost is \$100,000.
21

- 22 7. Concrete driveway installation at the water treatment facility. A concrete
23 driveway and parking area will be installed to reduce the maintenance required
24 on the existing stone driveway and parking areas. Additionally, this will allow
25 the Company to comply with City of Danville ordinances that require such
26 paving. The projected cost is \$100,000.
27

- 28 8. The replacement of a Distribution Crew Truck. This truck will replace a 1994
29 crew truck that has reached the end of it's useful life in terms of run hours,
30 years of service, mileage and/or cost to maintain. The projected cost is
31 \$70,000.

1 In addition, the Company will invest approximately \$200,000 in 2001 on various
2 smaller projects, tools and equipment.
3

4 **Q. Mr. Rakocy discusses the need for infrastructure investment in coming years.**
5 **Would you address the specific needs of the Vermilion County Division ("Division")**
6 **in this regard?**

7 A. The Division has several significant, unique and pressing needs with respect to
8 infrastructure investment in the coming years. Specifically, the replacement of private
9 water lines, the replacement of undersized water mains, the absence of fire hydrants in
10 populated areas, the presence of fire hydrants on undersized water mains and distribution
11 system caused water quality and/or low pressure complaints are all critical issues which
12 must be addressed by the Division.
13

14 **Q. What are private water lines?**

15 A. Private water lines are the result of the business practices of the owners prior to the
16 Company being purchased by Consumers Water Company in 1986. The previous owners
17 allowed customers desiring service, but not fronted by a water main, to connect to the
18 nearest water main via a long individual service line or a line installed to serve several
19 residences or businesses. This practice avoided any cost to the previous company for a
20 properly sized water main extension. It did, unfortunately, allow for improperly installed
21 water lines of unspecified materials to be connected to the then existing distribution
22 system. Several of these lines are known to traverse private property, alleys, etc. The best
23 estimate of the total lineal footage of these private lines in the Division equates to
24 approximately 27 miles of pipe. This detail is outlined in an in-house report titled Water
25 Main Replacement Prioritization Program ("Program") completed for the Division by
26 Company engineers which addresses the prioritization of water main replacement
27 projects, including the replacement of private water lines.

1
2 **Q. Why is the Division replacing these private lines?**

3 A. While the previous owners of the Company allowed these privately owned lines to be
4 installed, they also had a long-standing practice of maintaining these lines if there were
5 any leaks which occurred on the lines after their installation. This practice was no longer
6 followed after Consumers Water Company purchased ISW in 1986. As a result, the
7 Company initially refused to repair water lines that were owned by private individuals or
8 businesses and in many cases were located upon private property to which the Company
9 did not have an easement for maintenance. This led to several formal complaints to the
10 Commission by private line owners whose lines were in need of repair. A settlement of
11 these complaints was negotiated that outlined a clear and precise handling of this issue in
12 the future. This settlement requires the Division to maintain private water lines after first
13 having each customer attached to a private water line sign an agreement which specifies
14 the Company's obligation to maintain and eventually replace the line. Also, there was an
15 understanding between the Company and Commission staff that the Company would
16 diligently work to replace all the private water lines with properly sized water mains and
17 properly spaced fire hydrants to provide customers with adequate water volume and
18 pressure, improved water quality and fire protection.

19
20 **Q. What are the other significant needs associated with the infrastructure investment**
21 **in coming years?**

22 A. Among the other significant needs outlined in the Program are the replacement of
23 undersized and aged water mains, fire hydrants attached to undersized water mains and
24 distribution system caused water quality and/or low pressure complaints. Additionally,
25 the Division has a large number of lead service lines which require replacement, and
26 several thousand water meters which are non-remote reading and beyond their normal life
27 expectancy. These needs are described as follows:

- 28 1. **The replacement of undersized and aged water mains.** This is a significant
29 issue because 34.7 miles of the Company-owned 247 miles of main, or 14%
30 are less than 6" in diameter. As noted in the previous discussion of private
31 water lines, another 27 miles of water lines are extremely undersized private

1 water lines for which the Company has the responsibility for maintenance and
2 eventual replacement. Additionally, over 100 miles of water main or
3 approximately 40% of the Company-owned distribution system is pre-1940
4 vintage, and much of this water main is likely to be 80-100 years old. Lastly,
5 over 65% of the water mains in the Division are unlined cast iron pipe which
6 has a much higher breakage frequency than ductile iron pipe, the material used
7 almost exclusively for mains installed in the Division since 1986.

8 **2. Fire hydrants attached to undersized water mains.** There are 1,428 fire
9 hydrants in the Division and of that total, 51 or 3.6 % are attached to water
10 mains that 4" in diameter. These fire hydrants will be replaced to improve fire
11 flows.

12 **3. Distribution system caused water quality and/or low-pressure complaints.**

13 Due to the nature of the Division's distribution system, i.e. a large percentage
14 of undersized and unlined cast iron pipe, private water lines, inadequate
15 distribution grid reinforcement and a large number of dead end lines,
16 numerous water quality and/or low pressure complaints are encountered in
17 specific areas of the distribution system. The area west of the North Fork of
18 the Vermilion River is a prime example. This area, which contains a
19 population of approximately 5,000, is supplied by a single 10" transmission
20 water main. The area has numerous private water lines, miles of unlined and
21 undersized cast iron pipe and numerous dead end water mains. This
22 combination results in numerous annual water quality and/or low-pressure
23 complaints. Other areas throughout the distribution system are plagued by the
24 same problems. Capital projects will be completed annually to address these
25 problems.

26 **4. The replacement of lead service lines.** Lead service lines were not viewed
27 as problematic until the 1986 amendments to the SDWA. These amendments
28 contained the Lead and Copper Rule which set stringent "Action Levels" for
29 the regulation of lead and copper in drinking water. To avoid any potential
30 violations of the Action Levels, the Division has a program to remove lead
31 service lines from the distribution system. It is estimated that approximately

1 6,000 lead service lines still exist in the Division. The Division replaces
2 approximately 100 lead service lines per year.

3 **5. The replacement of old and non-remoted water meters.** The Division has
4 approximately 17,800 meters in the system. Of this total, approximately 3,600
5 of these meters are generator remote meters, non-remote meters or meters over
6 20 years old. All of these meters need to be replaced with current remote
7 reading technology to insure accurate customer billings and the efficiencies
8 that are derived from remote water meter reading.

9 These and other significant infrastructure investment must be made to allow
10 the Division to provide safe, reliable water service in the coming years.

11 12 **MATERIALS AND SUPPLIES**

13 **Q. Please discuss the Division's projection of its test year balance of Materials and**
14 **Supplies inventory as shown on CIWC Exhibit 12.0, Schedule B-8.1, sponsored by**
15 **Mr. Leppert.**

16 **A.** Mr. Leppert discusses the method used to compute the inventory balance. In my opinion,
17 the resulting test year balance of Materials and Supplies inventory, as shown in Schedule
18 B-8.1 of CIWC Exhibit 12.0 for the Vermilion County Division, is reasonable and
19 reflects the levels of materials and supplies which the Division must have on hand for
20 normal operations and emergency repairs.

21 22 **LABOR COSTS**

23 **Q. Would you comment on the forecasted level of labor expense for the Vermilion**
24 **County Division?**

25 **A.** Labor expense includes the negotiated wage increases as reflected in the Labor
26 Agreement with Local Union No. 51 of the International Brotherhood of Electrical
27 Workers (effective June 1, 1999 through May 31, 2002) which covers non-salaried, non-
28 office employees. Wage increases for non-union personnel have been forecasted to be 4%
29 in 2001.

1 **TANK PAINTING**

2 **Q. Please discuss the forecasted level of tank painting cost for the Vermilion County**
3 **Division.**

4 A. During the third and fourth quarters of 2000, the Division will paint the North Vermilion
5 standpipe and spheroid elevated tanks in the Vermilion County Division. A contract for
6 approximately \$550,000 has been signed with a contractor. The contract calls for the full
7 near white blasting of the tank surfaces due to the existence of lead based primers. This
8 will in turn require the placement of a complete enclosure or "shroud" to prevent the
9 migration of lead-containing dust from leaving the work site. The Company proposes to
10 amortize this expense over a ten-year period. As discussed by Mr. Leppert, the
11 unamortized balance of this cost is included in rate base.

12
13 **BUSINESS RISK**

14 **Q. Have the water quality regulations enacted to date affected the Vermilion County**
15 **Division?**

16 A. Yes. Mr. Rakocy discusses the relationship between business risks and water quality
17 regulations for the Company. The Safe Drinking Water Act regulations have required a
18 significant level of investment in plant improvements to meet applicable water quality
19 standards. The Vermilion County Division will incur costs of approximately \$6 million to
20 provide facilities for nitrate reduction and other regulatory compliance needs. In 1996, a
21 \$1.3 million clarifier was constructed to insure compliance with more stringent turbidity
22 and microbial standards. In 1991, the Vermilion County Division invested approximately
23 \$13.2 million in water treatment facilities to meet standards in existence at that time.
24 Since 1992, the Division has invested a significant amount of capital in service line
25 replacements to meet the lead/copper standards. The Division plans to continue the
26 replacement of all lead service lines which are presently in use.

27 Operations and maintenance expense has also increased. As a result of water
28 quality regulation, additional laboratory expense is incurred for additional testing and
29 training of personnel. Also, water residual disposal costs have increased.

1 **Q. Are there characteristics of the Vermilion County Division's service area which**
2 **affect the risks related to water quality regulation?**

3 **A. Yes. A large agriculture area (300 square miles) supplies water to Lake Vermilion. The**
4 **water supply is subject to contamination not only from nitrates but also from new**
5 **pesticides, herbicides, or heavy use of chemicals not now seen as problematic, urban**
6 **runoff and inadequate wastewater treatment. The Company must be continuously ready**
7 **to meet applicable standards and to protect the health of its customers. The watershed is**
8 **criss-crossed by numerous state, county and township roads as well as several railroad**
9 **lines. In fact, the main north-south transportation route (IL Route 1) in east central**
10 **Illinois crosses the North Fork River, the impounded stream forming Lake Vermilion,**
11 **three times in the watershed. These roads and railroad lines make the Vermilion County**
12 **Division's water supply extremely vulnerable to spills of hazardous materials. In**
13 **addition, at the headwaters of Lake Vermilion, a USEPA Superfund Hazardous Waste**
14 **Site has recently been remediated. Part of the Polychlorinated Biphenyl ("PCB")**
15 **Contaminated Superfund site actually extended into the North Fork River. Also, the**
16 **Vermilion County Division was the location of a much-publicized citizen-monitoring**
17 **report in late 1995. The Environmental Working Group, a Washington, DC-based**
18 **environmental lobbying firm, released a report, Weed Killers by the Glass, which listed**
19 **the Vermilion County Division Water Supply as the most herbicide-laden water supply in**
20 **the continental United States. This report garnered national press coverage, and local**
21 **confidence in the quality of the water supply was badly shaken. Lastly, the nature of the**
22 **Vermilion County Division's water source lends itself to inherent risks. Lake Vermilion**
23 **is a man-made impoundment, which frequently is minimally supplied in the dry weather**
24 **months. Therefore, should any contamination occur in the impoundment or the North**
25 **Fork River, the problem is not easily corrected by dilution or switching to an alternate**
26 **water supply. Lake Vermilion is the sole supply for 55,000 residents in Vermilion**
27 **County. All of these issues frame the unique risks surrounding the Vermilion County**
28 **Division's water supply.**

1 **Q. Please discuss the history of the Large General Service rate.**

2 **A. The Large General Service Tariff ("LGST") was first approved in Docket 91-0176. Since**
3 that time, the only customer served under the LGST has been Devro-Teepak, Inc.
4 ("Teepak"), the Division's largest customer. In each of the last two rate proceedings for
5 the Vermilion County Division (Dockets 94-0270 and 97-0351), the Company (or its
6 predecessor, Inter-State Water Company), proposed in the initial filing that rates
7 applicable to Teepak be increased by a percentage amount which was higher than the
8 overall average increase. Teepak, however, presented evidence in each proceeding
9 indicating that, if the rate proposed by the Company were approved, it would construct an
10 alternative water supply source and discontinue water purchases from the Company. In
11 light of this evidence, the Commission in each case approved an increase for the LGST
12 rate which was below the system average increase. As a result, the level of revenue
13 provided by Teepak did not cover the full cost-of-service assigned to the Large General
14 Service Customer Class ("LGS Cost"). The difference between the level of revenue
15 provided by Teepak and LGS Cost was assigned in each past proceeding to rates
16 approved for other customer classes, with the result that the approved rates were intended
17 to provide operating revenue equivalent to the full cost of service.

1 **Q. Please describe the LGST.**

2 A. The LGST requires a customer taking service under that rate to enter into a four-year
3 service agreement which provides for minimum usage of at least 35,000 hundred cubic
4 feet ("ccf") per month during each billing period. The LGST provides for a meter charge
5 and flat usage charge per ccf.
6
7

8 **Q. Has Teepak signed the four-year service agreement required by the LGST?**

9 A. Yes. Teepak signed a four-year service agreement which became effective in
10 January 2000.
11

12 **Q. Would you further discuss the alternative supply which Teepak believes it can
13 develop?**

14 A. Yes. In past proceedings, Teepak has presented extensive evidence indicating that it can
15 construct and operate its own water production facility at a cost lower than that associated
16 with continued purchases from the Company. Teepak's evidence has included detailed
17 information regarding engineering plans for the facility, and construction and operating
18 costs. That evidence has included a calculation of the rate impact on remaining
19 customers which would result if Teepak were to discontinue water purchases from the
20 Company. Teepak also has indicated the level of rates it would find acceptable as a
21 continuing customer of the Vermilion County Division.
22

23 **Q. What is the Company's proposal in this proceeding for the LGST?**

24 A. In preparation for this proceeding, the Company met on several occasions with
25 representatives of Teepak and the City of Danville ("City"). The Company also met to
26 discuss this matter with representatives of the Commission Staff. In the course of this
27 process, Teepak presented information similar to that submitted in past rate proceedings

1 demonstrating its belief that construction of an alternative source of water supply
2 continued to be a viable option. Teepak also indicated, however, that it would continue
3 to purchase water from the Company if the increase approved in this case for the LGST
4 were limited to 2.5%. The City's representatives also supported this level of increase for
5 Teepak, and agreed that the difference between the level of revenue provided by Teepak
6 and LGS Cost should be provided by other customer classes. The Staff representatives
7 indicated their agreement with this approach. Based on the information provided by
8 Teepak and positions taken by the City and Staff, the Company has proposed that the
9 LGST rates be increased in this proceeding by 2.5%. The Company's proposal, however,
10 is conditioned on continued assignment of the difference between the level of revenue
11 provided by Teepak and LGS Cost to other customer classes. If the Commission's Order
12 in this proceeding does not approve such an assignment, the Company proposes that the
13 LGST rate be increased to a level above the overall average increase for the Vermilion
14 County Division.

15
16 **Q. Is the proposed increase for the LGST in the best interest of other customers?**

17 **A.** Yes. As indicated above, Teepak has demonstrated that it will go forward with
18 development of an alternative water supply source if an increase greater than 2.5% is
19 approved. As a result, Teepak would discontinue water purchases from CIWC. The
20 substantial fixed costs incurred in providing service, however, would be unchanged.
21 Accordingly, if Teepak were to discontinue purchases, other customers would be required
22 to provide revenue needed to pay the fixed costs which would otherwise be covered by
23 revenue from Teepak. This would require approval of higher rates for the other
24 customers.

25
26 **Q. Does this conclude your testimony?**

27 **A.** Yes, it does.

Consumers Illinois Water Company

**Plant - In - Service Additions
January 1, 1998 - December 31, 1999**

Vermilion County Division

CIWC Exhibit 2.1
Page 1 of 1

PROJECT DESCRIPTION	ADDITIONS 1/1/98 THRU 12/31/98	ADDITIONS 1/1/99 THRU 12/31/99	TOTAL ADDITIONS 1/1/98 THRU 12/31/99
<u>Source of Supply Plant</u>			
Collecting and Impounding Reservoirs Lakes, Rivers and Other Intakes	\$ 3,355.32		\$ 3,355.32
<u>Water Treatment Plant</u>			
Structures and Improvements	\$ 73,322.01	\$ 3,690.83	\$ 77,012.84
Water Treatment Equipment		\$ 18.52	\$ 18.52
Pumping Equipment		\$ 34,500.96	\$ 34,500.96
<u>Transmission and Distribution Plant</u>			
Structures and Improvements			
Distribution Reservoirs and Standpipes	\$ 242,322.65		\$ 242,322.65
T & D Mains	\$ 200,701.04	\$ 673,308.02	\$ 874,009.06
Services	\$ 212,111.77	\$ 195,194.44	\$ 407,306.21
Meters	\$ 387,535.23	\$ 58,112.56	\$ 445,647.79
Meter Installations		\$ 5,865.75	\$ 5,865.75
Hydrants	\$ 41,306.97	\$ 50,949.20	\$ 92,256.17
<u>General Plant</u>			
Structures	\$ 32,620.60	\$ 6,176.34	\$ 38,796.94
Office Furniture and Equipment	\$ 92,398.68	\$ (1,282.86)	\$ 91,115.82
Data Processing Equipment	\$ 6,725.25	\$ 24,864.74	\$ 31,589.99
Transportation Equipment	\$ 25,922.96		\$ 25,922.96
Stores Equipment			
Power Generation Equipment		\$ 751.43	\$ 751.43
Tools, Shop and Garage Equipment	\$ 11,682.00	\$ 4,129.23	\$ 15,811.23
Laboratory Equipment		\$ 1,964.80	\$ 1,964.80
Communications Equipment	\$ 8,009.07		\$ 8,009.07
Miscellaneous Equipment		\$ 3,683.66	\$ 3,683.66
	<u>\$ 1,338,013.55</u>	<u>\$1,061,927.62</u>	<u>\$2,399,941.17</u>

Consumers Illinois Water Company

**Plant - In - Service Additions
January 1, 2000 - December 31, 2001**

Vermilion County Division

CIWC Exhibit 2.2
Page 1 of 1

PROJECT DESCRIPTION	2000 ADDITIONS TOTAL	2001 ADDITIONS TOTAL	TOTAL ADDITIONS 1/1/00 THRU 12/31/01
Source of Supply Plant			
Structures and Improvements	\$ 76,000	\$ 76,000	\$ 152,000
			\$ -
			\$ -
Regulatory Compliance Facilities			
			\$ -
			\$ -
Structures and Improvements	\$ 5,114,000		\$ 5,114,000
Water Treatment Equipment	\$ 1,000,000		\$ 1,000,000
			\$ -
Transmission and Distribution Plant			
			\$ -
			\$ -
T & D Mains	\$ 718,000	\$ 490,000	\$ 1,208,000
Services	\$ 210,000	\$ 210,000	\$ 420,000
Meters	\$ 250,000	\$ 250,000	\$ 500,000
Hydrants	\$ 100,000	\$ 100,000	\$ 200,000
			\$ -
			\$ -
General Plant			
			\$ -
			\$ -
Transportation Equipment	\$ 70,000	\$ 70,000	\$ 140,000
Structures and Improvements		\$ 100,000	
Miscellaneous Projects			
	\$ 825,000	\$ 117,000	\$ 942,000
	<u>\$ 8,363,000</u>	<u>\$ 1,413,000</u>	<u>\$ 9,676,000</u>